

CLAIMS

1/ A sensor for measuring a physical parameter of a fluid, in particular for measuring total air temperature, the sensor comprising:

- a fluid intake (1) fitted to a streamlined body (2);
- 5 · a duct provided in said streamlined body (2) to enable fluid flow, said duct communicating with said fluid intake; and
- a sensing element disposed inside said duct;

the sensor being characterized in that said fluid intake presents an inlet section which extends in such a manner as to define a surface that slopes
10 relative to the perpendicular to the main flow direction of the fluid at said intake, said surface defining a sliding surface for any pieces of ice that may come to bear thereagainst.

2/ A sensor according to claim 1, characterized in that the inlet section
15 presents an inclination relative to a section orthogonal to the main flow direction of the fluid.

3/ A sensor according to claim 1, characterized in that the inlet section
20 defines a sliding surface that is concave or convex.

4/ A sensor for measuring a physical parameter of a fluid, in particular for measuring total air temperature, the sensor comprising:

- a fluid intake (1) fitted to a streamlined body (2);
- a duct provided in said streamlined body (2) to enable fluid flow, said
25 duct communicating with said fluid intake; and
- a sensing element disposed inside said duct, the fluid intake (1) presenting an inside section defined by at least one plane surface (1b) which communicates with a chamber (7) that opens to the outside and that constitutes a boundary layer suction chamber;

the sensor being characterized in that said plane surface (1b) presents
30 for this purpose a plurality of suction slots (12) extending transversely relative to the general flow direction of the stream in the fluid intake.

5/ A sensor according to claim 4, characterized in that the slots extend in said
35 plane wall perpendicularly to the general flow direction of the fluid.

6/ A sensor according to claim 4, characterized in that the slots extend in a chevron shape in said plane wall.

5 7/ A sensor according to any one of claims 4 to 6, characterized in that the slots extend through the thickness of the wall so as to slope downstream.

8/ A sensor for measuring a physical parameter of a fluid, in particular for measuring total air temperature, the sensor comprising:

- 10
- a fluid intake (1) fitted to a streamlined body (2);
 - a duct provided in said streamlined body (2) to enable fluid flow, said duct communicating with said fluid intake; and
 - a sensing element disposed inside said duct;

the sensor being characterized in that the sensing element comprises a ceramic tube having a measurement resistive wire wound thereon.

15

9/ A sensor according to claim 8, characterized in that it includes a support mandrel carrying the sensing element and made of a thermally insulating ceramic.

20 10/ A sensor according to any preceding claim, characterized in that it includes a fixing flange (11) presenting a bearing surface that defines a fixing plane for the sensor, and in that the streamlined body (2) is inclined relative to the fixing plane and presents a longitudinal axis which extends other than perpendicularly relative to said plane.

25

11/ A sensor according to any preceding claim, characterized in that the angle between the longitudinal axis (A) of the streamlined body (2) and the direction perpendicular to the fluid flow and/or to the fixing plane lies substantially in the range 5° to 15°.

30

12/ A sensor according to any preceding claim, characterized in that the fluid intake (1) presents an inside section defined by two substantially plane surfaces (1b, 1c) extending facing each other, and interconnected by surfaces of rounded shape.